

DWIGHT'S AMERICAN MAGAZINE,

AND

FAMILY NEWSPAPER.

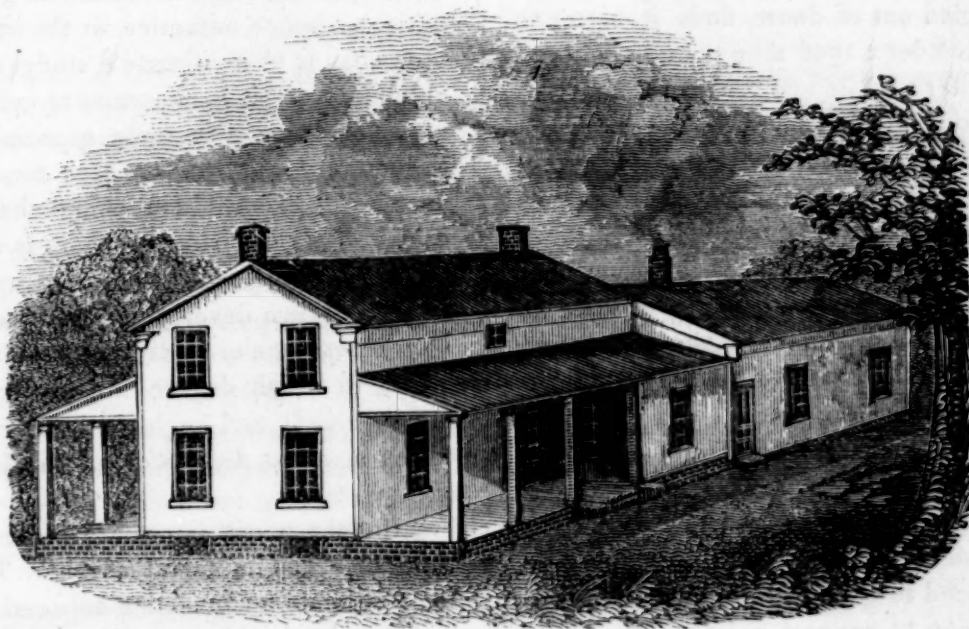
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No. 4.



A COTTAGE ON THE DUTCH PLAN.

We give this, not as a specimen of the pure Dutch style of cottages, but as one form of small country-houses frequently seen in this vicinity, and in some other places where the Dutch taste has had an influence in building. In Holland there has been, for centuries, a preference for long and low houses in the country, no less than for narrow and tall ones in the city. The latter, no doubt, was the resort of necessity. As soon as the traveller finds himself in the open fields, he sees the dwellings suddenly losing their elevation, and extending in long lines, at so small a height above the ground, that they are often concealed by the trees, or hardly distinguishable from the barns, which are in some places constructed in nearly the same proportions.

Our print represents a low house with a second story, which is by no means a usual part of the Dutch cottages that we

have seen. The two piazzas, in front and rear, are much more common appendages. And these, truly, have several considerable advantages. They not only give an air of comfort and convenience, by offering a partial protection from rain, snow and sunshine, but they in some degree guard the sides of the house from both temporary and lasting injury by the elements. But there are many errors committed in making piazzas: as by laying the floors too near the ground, or upon it, without providing for the circulation of air beneath, to keep the timbers and boards dry, and safe from rotting.

In our opinion, (but we express it with more diffidence on architecture than on some other subjects, because less familiar with it,) many a country-house, of almost every description destitute of a piazza, would be greatly improved by the

addition of one or more ; and we scarcely can recollect to have ever entered a dwelling provided with such an appendage, without perceiving more than one advantage arising from it. There is many a moment in the course of every stormy season, as well as of every winter, when some member of the family, occupied out of doors, finds it better to stand under a roof than wholly without a shelter : while many warm summer afternoons are rendered less oppressive, and many evenings prove doubly agreeable, to families who have places like these to resort to at their pleasure.

Although numerous habitations are seen in our country, built in a style as destitute of ornament as the above, and with as little regard to the beauty of proportion, there are perhaps none of them to which a piazza would not add some agreeable effect, or at least afford a concealment for some deformity. However plain the pillars or posts, that may be placed to support the projecting roof, they may be converted into columns of verdure and flowers during a large part of the year, merely by planting a few seeds at their feet in the spring ; and a single bird box, fastened at a proper height, may be made the orchestra of an innocent band of volunteer musicians for several months in the year.

Still, we would by no means discourage any attempts to introduce a more refined taste in architecture, while we thus venture a few words in favor of a style of great simplicity. We never ought to be content with a style of building so destitute of beauty as that of which we have given a specimen. The same money that would be required to build such a house, would be sufficient to erect one of more correct and agreeable proportions, with conveniences not here to be found, and yet leave enough to pay the architect for the plan, and perhaps for superintending the construction.

We add the following excellent gene-

ral remarks on rural architecture, from "the Architect," the new work by Mr. Ranlett, which we announced a short time ago.

"Our mental and physical tastes are equally the product of divine power and wisdom, and equally designed by the Creator to be exercised in lawful gratifications : hence æsthetics, or the science of beauty, is as legitimate a study as the culinary art. It is important to cultivate a proper balance in taste, especially in the ordinary ranks of society : for, while an artist is excusable in being absorbed in one of its departments, there is something repulsive, and bordering on the monstrous, in a development of it, which, like Shenstone's, cultivates and ornaments, in a high degree, the garden and other grounds, and neglects the dwelling, to the manifest discomfort of the family and guests.

"But the most important feature of this subject is its moral aspect. There is so intimate a connection between taste and morals, that they modify each other. Hence, whatever serves to cultivate the taste of a community, will be likely to improve their morals. From this view it follows, that he who corrects a vicious or improper development of public taste, or opens the way, or provides the means of proper æsthetic gratification, is to be looked upon as a public benefactor.

"While the products of painting and sculpture are necessarily limited and selfish in their effects, being shut up from public gaze, and designed to gratify only the proprietor and his chosen friends and guests, landscape-gardening is claimed as producing a far greater amount of public good, by spreading its beauties before the public eye, allowing the rich and the poor alike to look upon them and be delighted. Still more diffusive is the influence of architecture. Though the beauties of the garden are of a high grade, their lowly position requires a near approach,

that they may be appreciated: but many of the beauties of architecture are reared aloft, as if in the sunlight of heaven, to challenge the gaze and delight the minds of the passers by, far and near.

"Architecture, having no pattern in nature, is the most difficult and least regulated of all the fine arts. Painting and sculpture are imitations of nature; and the perfection of these arts is only the ability to make those imitations perfect. Poetry is a sublime and measured expression of the author's conception of grandeur and beauty. Landscape gardening was formerly the imitation of geometric figures: hence the ancient mode of it was called the geometrical style of gardening. In late improvements it consists in the imitation of nature: in curved walks and winding waters, and trees and clumps of natural shape; hence the present mode is called the natural style. Architecture is not the imitation of anything in nature or science: it is wholly artificial; and hence improvements in it are more difficult, being new intellectual creations. Indeed, for the number of styles, we might almost venture to multiply the number of civilised nations by the number of ages in which they have lived.

"The construction of dwellings is a department of enterprise and investment, which involves various considerations of vast moment. It should always be remembered that a dwelling is constructed 'for the accommodation of a family. Sound philosophy and good taste require that the site, form and character of a building, should be suited to its use and expressive of its destination."

TIME FOR TRANSPLANTING TREES.—Autumnal transplanting should be performed as soon as the frost checks the growth of trees. The soil is then mellow and easily pulverised; it becomes well settled about the roots, and the trees commence growing without interruption in the spring, and are not so liable to be injured by drought.

Great Iron Railway Bridge and Viaduct.

An iron bridge is to be erected in England, with a viaduct across the Tyne, from Gateshead to New-castle-upon-Tyne, for the Newcastle and Berwick railway, according to the designs, and under the instructions of R. Stephenson, Esq. It is to consist of six cast iron circular arches, with a curved approach at each end, and will, in fact, be a double bridge; the railroad on the summit, and a carriage road and two foot paths suspended from the arches. The span of the arches will be 125 feet, supported on pillars 21 1-2 feet high, and 14 inches square, and the approaches from both Newcastle and Gateshead will be 251 feet in length, and precisely similar. Two courses of 3 inch planking will be placed beneath the rails, between which will be a layer of Borrowdale's patent asphalted felt, to render them waterproof; and the carriage road beneath will be paved with wood to prevent vibration, and the foot path planked. Every arch will be completely erected on the contractor's premises by itself, when the engineer will inspect and test its strength and fitness. The quantity of iron required will be about 6,000 tons, and the contract is stated to be £120,000. The entire cost inclusive of lands and buildings, will be £300,000, and it is to be finished, so as to be available for public traffic, by the 1st of August, 1848.

NEW PLANING MACHINE.—Mr. Job Sheldon, of New Haven, Ct., has invented a machine for planing boards, in which is combined more originality of mechanical movement, with judicious proportion and application, than we have seen in any new invention within the year past. In this machine, the inventor has boldly struck out on entirely new principles of operation, and there appears nothing about the machine which bears any resemblance to those of Woodworth, Daniels, or any other in use. It carries a series of planing cutters, which work with a reciprocating motion, cutting transversely, but with oblique edges, in each opposite direction. Measures are already in progress for securing a patent, and the invention will, in some measure, relieve this branch of industry from the monopoly.—*Sel.*

Scientific Survey of the State of New York.

Concluded from page 39.

New York lies within the temperate zone, in the form of an irregular triangle, with its apex on the Atlantic, and its sides on the western border of New England, the St. Lawrence and Lake Ontario, and the northern boundaries of Pennsylvania and New Jersey. Long Island forms a singular appendage to the territory of the state, being a long, sandy spur, extending from the harbor of New York, eastward, one hundred and forty miles. In a zoological point of view it is one of the most interesting small tracts of lands in the country, as the reader will find in the sequel. Including Long Island, the state extends through eight degrees of longitude, and from 40 degrees, 3 minutes, to 45 degrees, of North Latitude, with an area of more than 46,000 square miles. It therefore covers a surface greater than Poland, Scotland, or Naples and Sicily; three times larger than Switzerland, and almost equal to England. It is nearly in the same latitude as Italy, the south of France and the north of Spain; and resembles them in the heats of summer: but yet the winters are as severe as those of the northern countries of Europe. Observations, made for ten years, show that the mean length of the winter in the state is 165 days, or about five months; and the mountains, although none of them exceed the height of 5000 feet, have a much colder climate than corresponding elevations in Europe. We have, therefore, within our boundaries, animals which are found, in the old world, only at great distances from each other: as the Cervidæ and Mustelidæ of the south of Europe, and the Muridæ and Vespertilionidæ of the north.

Dr. Dekay divides the state into four districts, which are distinguished by geographical peculiarities, and not less by zoological.

1st. *The Western District* is bounded east by the Mohawk Valley, and is chiefly elevated on the Allegany table-land, furrowed by vallies lying north and south, once probably outlets of an inland ocean. The descent westward is sudden, to Lake Erie; while ten or twelve small lakes in the middle are drained by the Genesee river, and visited by salmon from Lake Ontario. The great Lakes

have much influence on the climate. Here are found the Northern Lynx, with the Deer-Mouse and Porcupine. Streams flow from this district to the Mississippi, and to the Susquehannah and Delaware.

2. *The Northern District* has mountains, some 5000 feet in height, with Lake Champlain, 140 miles long; and is inhabited by several fur-bearing animals: the Sable and Beaver, and also by the Moose and the Wolverine. It is the southern limit of migration of many of the Arctic birds, as the Canada Jay, Spruce-grouse, Swan, Raven and Arctic Woodpecker.

3. *The Hudson Valley District* lies in the form of an inverted L; and, though small, is highly interesting, as it contains many of the animals of the adjacent N. England States, while on the west it has the Kaaterskill mountains, some of which rise 4000 feet, and are still the habitation of wolves, deer, panthers and bears. The Erie Canal has brought into the Hudson the soft-shelled Turtle and the Rock Bass from the Lakes; as the Yellow Perch and the Muskalonge have found their way from Lake Erie to the Mississippi through the Ohio Canal. The southern part of this district teems with inhabitants of the ocean. It is remarkable that some species of animals find the Hudson their natural eastern boundary: as the Opossum, Chain-snakes. Brown Swift, Buzzard, and several other birds come to its western borders, but never cross it. At the same time, there are some species which abound in the countries on the eastern side, but are never seen on the western.

4. *The Atlantic District* or Long Island, runs about 150 miles North-East-erly, with a mean breadth of 10 miles, having low sand hills in the northern part, only in one place 300 feet high. The Bear, Wolf and Otter have been exterminated: but the Deer remain; and, although much hunted, are believed to be on the increase, since they have begun to be protected by law during the breeding season. This remarkable tongue of land, stretching nearly at right angles from the coast south of it, is the first resting-place offered to many of the birds, on their migrations from the West Indies and other southern regions, after a long flight over the waters of the ocean. It happens also to lie in such a latitude, that it is at once the northern limit of the

tropical birds, and the southern limit of the Arctic. In winter the Eider Duck is found on Long Island, the little White Goose, the Cormorant, the Awk, and many others from the Arctic Ocean; while in summer are to be seen the Turkey-Buzzard, the Swallow-Tailed Kite, the Fork-tailed Fly-catcher from Guiana, &c., &c. Here is also the natural limit of certain species of fish, some from the north, and others from the south.

After giving us these and other interesting general facts, Dr. Dekay presents us with a list of the genera of quadrupeds, or rather Mammalia, found in the state; and on the subsequent pages of the volume the reader may be sure of finding a description of all, with references to other works containing authentic and more minute details.

Railroad to the Pacific.

Every day this great subject becomes more and more important. In looking at this great project our main doubt has been, not that the road can be built, or that the lands asked for may be adequate to the cost, or would not settle fast enough for the object, but whether the people would pay for the lands, and whether Mr. Whitney would have power or means to enforce payment. But on farther reflection we are inclined to a satisfactory opinion on this point. The road will be absolutely necessary for settlement and the communication with markets. Without it the produce cannot be got to market. About twelve hundred miles is devoid of timber; houses or cabins cannot be built without the road on which to transport the timber. In fact, the lands are worthless and could not be occupied without it. The settlers can do nothing unless there is a road. All their interests are so connected with it as to be part and parcel of it. It takes their produce to market, it enhances the value of their lands, and the money they pay is in fact all for their own benefit, which could not be arrived at in any other way.—Therefore we think they cannot refuse to pay.

Our connexion with Oregon, and the fact that California is now in our possession, and must remain or will soon be a part of our territory, either by cession or annexation, makes this subject vastly important.—The question may well be asked, what shall we do with them?

They are too far off for any connexion with us, unless we have this road; they will soon become agricultural, commercial and manufacturing; then they will have no commodities to exchange with us, and we none to exchange with them; both producing exactly the same. We are six months from them, and they have directly in their front all Asia, with a population of more than 700,000,000, and the most tranquil ocean between, opening to them the entire control of the richest commerce the world has ever known. They can have no object or interest in connecting with us. They are too far off for our support in case of need, and they must become rivals; and in time control and command us. The Senate's committee say on this subject:—

“Another powerful consideration in favor of the proposed road the committee will advert to. It is the probability of the occurrence, that as the territory of Oregon, now so distant from us, fills up with an enterprising and industrious people from the several states, they will attract to them settlers from the different parts of Europe, all wishing to share in the benefits of our free government, and claiming its protecting care, which cannot be bestowed in full measure, by reason of the difficulty of access by land and by water. A well grounded apprehension seems then to exist, that unless some means like the one proposed, of rapid communication with that region, be devised and completed, that country, soon to become a state of vast proportions and of immense political importance, by reason of its position, its own wants, unattended to by this government, will be compelled to establish a separate government—a separate nation—with its cities, ports and harbors, inviting all the nations of the earth to a free trade with them. From their position, they will control and monopolise the valuable fisheries of the Pacific, control the coast trade of Mexico, South America and the Sandwich islands, and other islands of the Pacific, of Japan, of China and of India, and become our most dangerous rival in the commerce of the world. In the opinion of the committee, this road will bind these two great geographical sections indissolubly together, to their mutual advantage, and be the cement of a union which time will but render more durable.”—*See*.

Way in which the Hieroglyphics were Deciphered.

A plain and very satisfactory account was given by Mr. Gliddon, in his lecture, on the process by which the celebrated Rosetta Tablet was used in discovering the long lost interpretation of Egyptian Hieroglyphical writing.

That stone was discovered in 1799, at Rosetta, on the site of an ancient temple, and bore three inscriptions, one in hieroglyphical characters, a second in the later demotic letters equally unknown, but a third happily in Greek. Dr. Young, after it had been removed to England, having read the Greek, imagined that it might perhaps be a translation of the other two; and, after some examination, observing that the name of Ptolemy occurred several times in that language, sought for some indication of it in the others. In several places groups of hieroglyphics were found surrounded by oval figures: but as there were 54 lines in the Greek and only 32 in the hieroglyphics, it was difficult to determine the corresponding parts. The upper part of the latter was also broken off, so that it could not be discovered how many characters had been lost. He therefore began at the bottom, and found that several of the ovals corresponded in situation with the name of Ptolemy. But most of them contained several characters more than the number of letters in the Greek name. Yet in two instances the number was exactly the same.

The name of Cleopatra also corresponded, in position and number of letters, with another oval; and the figure of a crouching lioness in that, as well as in "Ptolemy," had the place of the letter L. From this second step in the discovery the fact was established, that the inscription was to be read from right to left; and these two names furnished several of the letters of the alphabet. This may seem but a small beginning, since not a word was yet known of the language to which these letters belonged. However, this is as much as was known by the most learned of Europe in 1817, and as much as any one knew many years later, except Young and Champollion le Jeune.

Clement of Alexandria, of all the ancient writers who have noticed Egyptian writing, seems to have been the only one who had even a single idea of the princi-

ples on which it was founded. He remarks that it is figurative of ideas and symbolic of characters. This hint was happily not lost on Champollion and Young. They both, about the same time, hit upon the application which proved successful. *Laburi* is the Coptic word for a lioness, and that is the figure standing in the place of the letter L in both Ptolemy and Cleopatra. This was the second ray of light; and it has led to all the later discoveries. It was soon found that the figures in hieroglyphical writing were representatives of the first letters of their names in Coptic; and a considerable part of the labor since bestowed has been directed to the recovery of that language, of which little was known, and many erroneous impressions existed before that period.

The name *Coptic* is a corruption of *Ya-coupti*: a remnant of an Egyptian sect, which retained the ancient language of the country until about two centuries ago. The scriptures and some other works, it is well known, exist in Coptic: but they are in dialects materially changed since the days of ancient Egypt, so that some ancient words are still doubtful, and others wholly lost. The characters also underwent several important changes in the course of ages, which have added greatly to the labors of archaeologists.

The original characters, or pictures, used until B. C. 1800, were recorded in three different ways: viz. by sculpture on stone, (usually in low relief, and commonly painted after nature;) by painting alone, usually in black, as in many cases; and by linear outlines. The Hieratic or sacerdotal style, invented by the priests for purposes of secrecy, is merely a kind of short hand, formed by abridgements of the original figures.

About the seventh century B. C. the Hieratic was still farther abbreviated, and what is called the Demotic, or people's character, was introduced.

The characters in the name of Ptolemy are, 1st a square, for the letter P; 2d a half sphere, which is often substituted, in other words, by a hand. The Coptic name of the former is unknown: but, as that of the latter is *tol*, that also must begin with t; 3d a flower, in Coptic *oke*, which is found also in "Cleopatra," and of course represents o; 4th the lioness, L. The letter m is represented

by a half cubic measure, which was called *mahi*. Two tops of reeds stand for the diphthong *ai* in the Greek name Ptolemaios; and the figure of the syphon, (an instrument of Egyptian invention), occupies the place of the final *s*. Its Coptic name has not been ascertained: but it is used as a homophone of an egg, which is known, and begins with *s*.

Now the importance of the discoveries of Young and Champollion may easily be understood, when it is known that the system of interpretation to which they have led, is applicable to legends of every age, from the highest antiquity.

Many interesting points in the lectures of Mr. G. we are compelled to pass over unnoticed. He presented a variety of specimens in the different kinds of writing, beside those hung upon the walls of the room; with remarks highly instructive, and appropriate, and such intimations respecting the topics to be touched in the subsequent parts of the course, as afford pleasing anticipations of what is to follow. We are attending his course, taking notes, and making enquiries and observations, for the future gratification of our readers, as well as of ourselves.

AMERICAN ART UNION.

It was established for the purpose of nurturing and warming into strength and beauty the arts, so long and so sadly neglected in our own country; yet, at the same time, it offers rewards to its subscribers for the interest they manifest in its success. Five dollars are received from each subscriber; and with the money thus obtained an engraving of the largest size and of great merit is made of some picture of acknowledged worth, a copy of which is sent to each subscriber. With the remaining funds paintings, sculpture, &c., are purchased to be divided by lot among its subscribers. Thus the institution calls forth, by its patronising power, the latent energies and genius of native artists; and in return to those who encourage it, sends a beautiful as well as valuable line engraving, and proffers also an equal chance to all of receiving by lot, a painting or other work of art, worth twenty or perhaps a hundred times his yearly subscription; and added to this, he has that reward which a good man feels who leaves written upon the pages of his country's his-

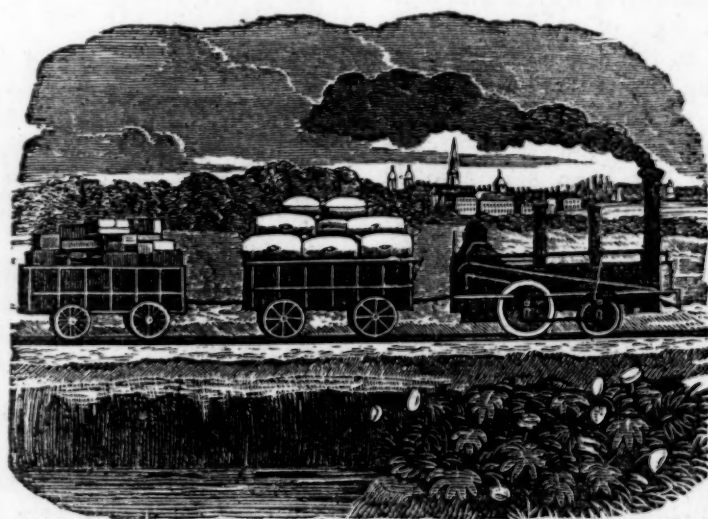
tory, the evidence that he has not lived only for himself.

What reflecting and intelligent mind will doubt the importance of such an institution? In other lands, genius receives the fostering care of the nobility, who hope, by the light of the artist's fame, to be warmed into a greatness, known, but not often appreciated by them. Lords and Princes are the patrons not only of the Arts, but the Artist; and thus many, who uncared for, would have remained *poor* artists, in the widest sense, have been called forth, and have given to their country, as well as themselves, a name which shall be remembered, "till time shall be no more." While, in our own land, where breathes no castled lord," the painter and the sculptor find no power to sustain or encourage but the energies of an American heart; and it is here that the Art-Union meets our Artist, battling against the palsied influence of seeming neglect, and proffers her aid, with a partial assurance, at least, that he shall not fail.—*Sel.*

The Few Grains of Wheat.

There was once a Spanish lady, a certain Donna Maria d'Escobar, living at Lima, who had a few grains of wheat, which she had brought from Estramadura. She planted them in her garden, and of the slender harvest she distributed to others, until that which had been counted in grains was counted in sheaves; and that which had been counted in sheaves was counted in fields; and thence came all the corn which is now found in Peru. This anecdote—it is told, I think, by Southey—made a strong impression on my fancy many years ago; and it recurs to me often when I feel discouraged at the slow dissemination of the most obvious truths.—*Christian Alliance.*

We notice that the 'American Phonographic Journal,' will be issued monthly by Andrews and Boyle, 339 Washington street, Boston. The Journal will be executed on Copper Plate, thus rendering it perfectly legible to all who have become familiar with the first principles of Phonography. The terms are One Dollar per annum, in advance.



A LOCOMOTIVE AND FREIGHT-CARS.

At a time when railroads and their appendages form so important and general objects of attention, and when they have produced so many changes in the rates, modes and circumstances of travelling and of transportation, it seems almost superfluous to make any remarks upon the simple principles which lie at the foundation of the wonderful art of steam power, or on the construction of steam engines. But we have too many evidences around us, of the extensive ignorance which prevails, respecting even the first and simplest points connected with the subject; and have therefore determined to lay before our readers, from time to time, some extracts which we have prepared, from the celebrated work of Pambour on Locomotive Engines.

"The principal parts of the engine are: the fireplace and boiler, which constitute the means of raising the steam; the slides and cylinders which are the means of bringing into action the elastic force residing in that steam; and the cranks and wheels, by means of which the motion is transferred from the piston to the engine itself.

1. *Of the Boiler.*—The body of the machine is composed of three distinct compartments. The one fronting the machine, and which is surmounted by the

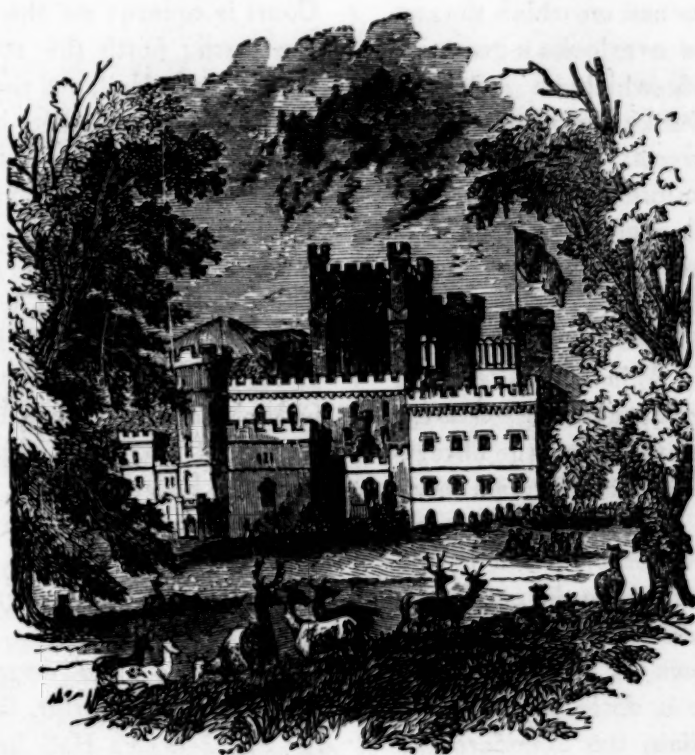
chimney, is separated from the two others by a partition. The two others together form the boiler. Both are filled with water to a certain height, but part of their internal space is occupied by the fire, as will be explained.

In the hindermost compartment is placed a square box, which contains the fuel, or forms the fireplace of the machine. Between the sides of that box and those of the compartment in which it is contained, a space is left, which communicates freely with the remainder of the boiler, and which is consequently filled with water. The inner box is supported in the compartment in which it is contained, and joined to it by strong bolts.

The fire-box being thus placed in the middle of one of the compartments of the boiler, would be surrounded on all sides with water, were it not for the aperture, which forms the door of the fireplace, and the bottom of the box which is occupied by a grate.

Near the door and in the machine, is placed a strong supporting board. The use of this board is for the engine-man to stand upon. Directly behind the machine comes the tender carriage for coal and water."

(To be Continued.)



WINDSOR CASTLE.

This ancient residence of the British kings has many of those features which we naturally look for, in our foreign travels, as characteristic of royal abodes. It stands on an eminence, of no great height it is true, yet of sufficient elevation to render the pile of edifices of which it consists conspicuous from all sides, for a considerable distance; the surrounding country being but little varied in surface, and presenting few obstacles to an extensive view. The general impression of Windsor Castle, from whatever side it is contemplated, is that of antiquity and beauty: having more of lightness, from its numerous windows, and the open-work style of building, than would be consistent with the nature and objects of a place of defence, which its name implies. Indeed the repulsive and frowning aspect of a fortress has been for ages giving place to the softer features which taste and luxury have gradually added in times of peace. Parterres and gardens enliven the view and invite the approach of the visitor, while

painting and sculpture, and the rich productions of the loom vie with each other in enriching the interior.

The traveller finds it no difficult task to obtain admission, and the windows offer him a variety of beautiful scenes on different sides, in which the display of military precaution and preparation seem retained, only to remind him of what Windsor Castle once was, and to increase by contrast the placid beauties of nature and art around him.

To a reader of English poetry, as well as of English history, the vicinity presents some points of interest.

"Thy forests, Windsor, and thy green retreats,
At once the Monarch's and the Muses' seats."

These and other passages, read in our far distant land, recur to our memory with pleasing associations, when we approach the ancient towers and tread the spacious and embellished grounds represented in our print.

From the eminence on which the castle stands, the eye overlooks a great extent of woodland, which an American might almost mistake for a portion of our uncleared forests. On the south is the Park, fourteen miles in circuit, containing deer, and presenting scenes of groves and copses; while the 'Long Walk,' which leads to it, is a fine avenue shaded by a double row of trees, three miles in length. Windsor Forest, the old royal hunting grounds, spreads far away over the country below the observer, and covers a surface fifty-six miles in circumference. Some of the largest, most aged and venerable oaks in the kingdom, are found among the patriarchs of that extensive district.

The present town is properly called New Windsor, for it dates only back to the time of William the Conqueror, to whom the Castle owes its foundation. The Saxon kings had their residence in Old Windsor, some distance east. The new town is a borough and market town of Berkshire, 22 miles south-west by south from London. It is pleasantly situated, on the Thames, and contains about 4,000 inhabitants. It belongs to the Crown, as it has done ever since the Conquest. The three principal streets are handsome, and well paved and lighted.

The Castle has been the favourite residence of the Kings of England for seven hundred years. Edward III. almost rebuilt it, so extensive were the repairs which he gave it. During the civil wars it was much dilapidated, and restored in the reign of Charles II. The grand terrace on the declivity of the hill, is 1870 feet in length, faced with free-stone, and ends at the gate which opens into the Parks. These are several miles in length and surrounded by a high brick wall.

The Castle is divided into two courts, by the Great Round Tower, or Donjon; and covers twelve acres. The Upper

Court is square; on the west of it lies the town; north the royal apartments, St. George's Hall, and royal chapel; east and south the chambers of the officers of state. In the centre of this court is an equestrian statue of Charles II., in the dress of a Roman emperor; under which is some curious machinery, by which the palace is supplied with water.

The lower court is of larger size, and divided into two parts by St. George's Chapel, formerly dedicated to Edward the Confessor. On the western side were the houses of the "Poor Knights of Windsor," who receive every year, £18, and a scarlet gown, with a cross on the sleeve. On the north side are the star-buildings.

St. George's Hall, appropriated to the Knights of the Garter, is 108 feet long. In St. George's Hall lies buried King Henry VIII. In the Round Tower is a free school. The barracks, for horse and foot soldiers, are extensive.

In the Castle are numerous apartments; among which are the Queen's guard chamber, presence chamber, ball-room, drawing-room, room of beauties, Queen Elizabeth's chamber or picture-gallery; as well as the various rooms appropriate to the Kings.

Many additions and improvements have been made in different parts of the Castle, since 1824, when Parliament appropriated for the purpose £500,000.

At a time when the various arts have attained so high a degree of improvement, and when landscape gardening and the interior embellishment of buildings are so successfully cultivated, it might be expected that the large sum of money above mentioned would be applied with great effect to this ancient Castle and its grounds. A visitor, properly prepared by the reading of history, and the training of the taste for nature and art, may here find subjects for pleasing and useful contemplation, even during a protracted stay.

"THE TREES OF AMERICA."

The examination of this newly published work of Mr. Browne, has impressed us anew with the exceeding importance of extensively cultivating the branch of science to which it is devoted. If all men were of our opinion, and felt the zeal with which we are filled, an important change would be made in the education of many of our children before the close of the week. Teachers, and not they alone, but parents, would begin to direct the attention of the young to the subjects of the vegetable kingdom around them, and give a direction to their taste, at least, even if they felt incompetent to introduce them to the science. As things are, the very opposite is done, and every day doing. The teacher does not encourage even a desire to learn: much less does he communicate any knowledge of this great and essential branch of a good education. We speak it with bitter regret, and with a reluctance which arises from a sense of national reproach, when we say, that even many of our highest institutions, our colleges and universities, do incalculable injury to the country, by treating botany, in all its departments, with silent contempt. We are aware of the common apologies which are so ready in the mouths of those who pursue or advocate the old plan of education; we know that "much is now crowded into four years," and that "the discipline of the mind is a very important object." But we are by no means as well satisfied with these, or any other excuses, as some of our countrymen and highly esteemed friends. We have looked upon these subjects first from the windows of a college, and then from the haunts of men and the scenes of nature. We have theorized and we have practised; and our practice has been varied between things and men, youth and children. The results have been long ago produced, and now for many years have been receiving confir-

mation; and we feel confident, that if a similar course of observation, enquiry and experiment had been the lot of some of the most influential teachers of youth, they would be, at this day, among the warmest advocates of engrafting the study of nature upon every system of education.

Although we can never pursue this subject even as far as we have already gone, without feeling that it presents numerous and attractive ramifications, we have no intention, at the present time, of extending our remarks beyond very moderate limits. We will answer, in one of the shortest and most effectual modes that the logic of the schools offers to us, the objection respecting "the discipline of the mind." We have the pleasure of a personal acquaintance with Mr. Browne, the author of the volume before us; and can confidently say, that his mind exhibits as much evidence of good discipline, as if it had been trained four, eight or twenty years in Greek and Latin, although he spent much of the time which is devoted by many others to those studies, and their sisters, Algebra, fluxions, &c., in traversing large portions of the two continents, in search of a practical acquaintance with botany and other natural sciences. If our opinion is "good enough for ourselves," as we may perhaps be reminded, we may request the attention of a doubter, to the plan and execution of his book: a plan exhibiting a regular and perfect, though a broad and complex system, embracing ten thousand objects, each claiming a particular place of its own, and there to be found, with unvarying certainty, in the midst of its own kin, and attended by a list of terms expressive of its attributes, each applied, not only with studied accuracy and the utmost conciseness, but according to fixed rules of order, which, we will venture to say, are regarded, from one end of the volume to the other. This shows much "discipline of the mind."

We are no depreciators of the ancient tongues—(nay, we read three of them almost every day of our lives, and have taken the pains to learn to speak some Greek), but we lament to see the old monkish ideas still bearing rule in our institutions of learning, because they depreciate some of the vital branches of knowledge, while they elevate their favorite ones, and sometimes for other reasons than the best.

It is a common complaint, that the noble art of agriculture is neglected by men of education, and that the country suffers in consequence. We will venture to say, that the ground of this complaint will fast disappear, when the study of the sciences most essential to agriculture shall begin to be taught, or even be recommended by teachers, as worthy of attention and admiration, as of the highest interest to man, abounding in gratification and improvement for the mind, and as essential and indispensable parts of a good education.

We have made this long preface, at the risk of leaving ourselves but little room to say what we wished, to say in illustration of the advantages which an acquaintance even with one branch of botany would give to a person in common agricultural life. However, we may perhaps have done as much to attain our ultimate object, if the preceding remarks should lead to a deliberate consideration of the question.

We would that a few, at least, of our parents would take the subject into their own hands. Each of us should do so, whether we have good instructors for our children or not. We are sensible that the first exclamation from many will be, at the first mention of such a plan, that it cannot be done, for want of knowledge. But they are greatly mistaken, who think they cannot easily do much to direct and improve their children, with a book like this in their hands. Let any man read a single page, and he will find

several interesting and useful facts which he can easily communicate to his children, and which they are ever ready to receive with gratification. Let the experiment be made; and we are sure it will be successful.

To choose from multitudes of the topics embraced in this volume, we will take seeds and wood. It is one on which we have often conversed with our young friends, the children of our family and neighborhood, and what we may now say will be a part of what we have often said and heard.

The subject can hardly be mentioned without the expression of a lively interest; showing that the minds of the young early discover something of its curious and wonderful nature. Seeds are of various forms and sizes, of different qualities and uses. To be ignorant of some of the most valuable kinds of food, and of the objects of the labors of millions of our race, who are employed in the culture of wheat, rice, &c., may easily be shown to be foolish and blameable.

The following notes relative to the duration of the locust wood [*Robinia pseudo-acacia*,] have been made by M. Pepin, Jardin du Roi, Paris:—A number of trees were felled that had been planted from 40 to 50 years; but not more than one to five of those wheelwrights who came to purchase, appreciated sufficiently the locust, the others preferring elm. Ultimately the locust was sold to the persons who knew its value, at one third higher price than the elm. The purchasers found that spokes made of the wood in question lasted two sets of felloes, and were likely to answer for a third. Under equal circumstances of wear and tear spokes made of locust wood were perfectly sound, while those of oak required to be replaced. M. Pepin further states that the ends of locust gate posts which had been in the soil for upwards of forty years were still not decayed. This sort of wood employed as feet or supports to chests made of oak, proved sound, although the oak plank in contact with them had been thrice renewed; but oak supports decayed simultaneously with the oak planks of the chest. We repeat such facts are pleasing and useful.

Process of Daguerrotyping.

The art of Daguerrotype consists in copying the image of external objects upon a plate of silvered copper, by the agency of light; and its discovery is due to two skillful French chemists, M. Daguerre and M. Niepee, who were liberally rewarded by the French Government, and has since been much improved by M. Figeau and other modern chemists. It is probably one of the most beautiful discoveries in modern science that has ever been made, and it has been brought to such high perfection, that pictures are obtained in the very short space of half a second, and thus very transient objects are represented.

But this, like almost every thing else, has its imperfections, and its principal imperfection is owing to the fact that the colors of external objects are scarcely ever produced upon the silver plate in their natural state; thus an object of a green color is scarcely at all defined, whilst objects of a blue color are intensely defined. The colors of red and orange are also very feeble in their effects; and thus to produce a good picture, objects should be selected from which the colors of red and orange are absent; it would, therefore, hardly answer for taking landscapes in their natural colors, and when color is wanted upon a picture, it must be produced artificially by pencil and brush.

The principal agents used in this art, at the present day, are as follows:

Bromine Water; Bromide of Iodine; Chloride of Bromine; Chloride of Iodine; Pure Mercury; Hyposulphate of Soda; and Chloride of Gold.

As it is easily perceived that Iodine is the basis of almost all the sensitive solutions, it may not be out of place to give a brief description of it.

Iodine is a simple non-metallic substance, extracted from the ashes of marine plants of a bluish black color, discovered at Paris, in 1812; its density is nearly 5; it fuses at 225 degs., and boils at 350; it unites with oxygen in three proportions, forming acids, which form salts; it also combines with all the metals, and almost all of the non-metallic bodies; it combines with Chlorine and Bromine, to form the solutions indicated by their names above, which are the solutions in general use.

The outline of the process by which

images are fixed upon the plate is as follows: The silver is first carefully cleansed and polished, by means of French Tripoli and Nitric Acid, and is finished by rubbing with a mixture of Lampblack and fine Rouge: it is then immediately buffed, to remove all particles of fine dust.

The next operation consists in exposing the plate polished as above, for a short space of time (which is variable) to the vapors of either of the very sensitive solutions given above: this is done by placing the plate in a box, in which is a small portion of the sensitive solution. This operation should be performed in the dark.

The next operation consists in exposing this plate, prepared as in the preceding operation, to the influence of light in a Camera; the time which a plate should be exposed to the action of light in the Camera is variable, owing to various causes, as clearness of the atmosphere, color of the object, and the sensitive solution employed. After it has been exposed to the action of the light a sufficient time, it is removed: if now it be examined, it will be found there is no picture formed upon the plate: it is latent, and the operation of making this picture visible, we will now describe.

The plate, after it is taken out of the Camera, is exposed, in a box, to the action of the vapors of pure Mercury, heated by a spirit lamp to 170 degs.; it should never be heated above this, and after it has been exposed sufficiently to bring out the picture, it should then be fixed so that the light can no longer act upon it. This part will form the next process.

This operation consists in washing the picture, after it has been rendered visible, with Hypo-sulphate of Soda and distilled water, and is dried by heating the plate underneath by a spirit lamp, and gradually blowing it until every drop has disappeared. In this operation it is essential that the water be absolutely pure, for, if it is not, when it evaporates it will leave spots upon the surface of the plate, and thus destroy its beauty. Thus we come to the next and last operation.

This consists in covering the picture, as just formed by the preceding operation, with a film or thin coating of gold: the only apparatus required is a spirit lamp and stand. Wet the surface of the

plate standing in a horizontal position with Alcohol, then pour on as much of the Chloride of Gold as will remain upon the plate, (the Alcohol is only used for the equal distribution of the Chloride of Gold upon the surface of the plate;) after this, heat is to be applied to the under-surface of the plate, and as uniformly as possible, until the picture is visibly improved; it is then washed in distilled water, and dried as before.—*Sat. Cour.*

Incident of a Canadian Winter.

In the middle of the great St. Lawrence there is, nearly opposite Montreal, an island called St. Helen's, between which and the shore the stream, about three quarters of a mile broad, runs with great rapidity, and yet, notwithstanding this current, the intense cold of winter invariably freezes its surface. The winter I am speaking of was unusually severe, and the ice on the St. Lawrence particularly thick; however, while the river beneath was rushing towards the sea, the ice was waiting in abeyance in the middle of the stream until the narrow fastness between Montreal and St. Helen's should burst and allow the whole mass to break into pieces, and then in stupendous confusion to hurry down towards Quebec.—On St. Helen's there was quartered a small detachment of troops, and while the breaking up of the ice was momentarily expected, many of the soldiers, muffled in their great coats, with thick storm-gloves on their hands, and with a piece of fur attached to their caps to protect their ears from being frozen, were on the ice employed in attending to the road across it to Montreal.

After a short suspense which increased rather than allayed their excitement, a deep thundering noise announced to them that the process I have described had commenced. The ice before them writhed, heaved up, burst, broke into fragments, and the whole mass, excepting a small portion, which, remaining riveted to the shore of St. Helen's, formed an artificial pier with deep water beneath it, gradually moved downwards. Just at this moment, a little girl, the daughter of an artilleryman on the island, was seen on the ice in the middle of the river, in an attitude of agony and alarm. Imprudently and unsoberly, she had attempted to cross over to Montreal, and

was hardly half way when the ice, both above, below her, and in all directions, gave way. The child's fate seemed inevitable, and it was exciting various sensations in the minds, and various exclamations from the mouths of the soldiers, when something within the breast of Thomas Neil, a young Sergeant in the 24th Regiment, uttered to him the monosyllables, "*Quick—march!*" and in obedience thereto, fixing his eyes on the child as on a parade banderole, he steadily proceeded towards her. Sometimes before him, sometimes just behind him, and sometimes on either side, an immense piece of ice would pause, rear up on end, and roll over, so as occasionally to hide him altogether from view.


Sometimes he was seen jumping from a piece that was beginning to rise, and then, like a white bear, carefully clambering down a piece that was beginning to sink; however, onwards he proceeded, until reaching the little island of ice on which the poor child stood, with the feelings of calm triumph with which he would have surmounted a breach, he firmly grasped her by the hand. By this time, he had been floated down the river nearly out of sight of his comrades. However, some of them ran to their barracks for spy-glasses, distinctly beheld him about two miles below them, sometimes leading the child in his hand, sometimes carrying her in his arms, sometimes "halting," sometimes running "double quick;" and in this dangerous predicament he continued for six miles, until after passing Longueuil, he was given up by his comrades as lost. He remained with the little girl floating down the middle of the river for a considerable time; at last, towards evening, they were discovered by some French Canadians, who, at no small risk, humanely pushed off in a canoe to their assistance, and thus rescued them both from their perilous situation. The Canadians took them to their home; and in due time, they returned to St. Helen's. The child was happily restored to its parents, and Sergeant Neil quietly returned to his barracks.—*Head's Emigrant.*

The entire cost of 101 miles of railroad, to be laid between Vidalia and Bayou Cotile, La., which road will form a portion of the Great Southern Railroad, will be \$857,250, or \$8,477 per mile.

Lessons in Grammar.

Distinctions between *sit* and *set*.

Question 1.—Will you explain the words *sit* and *set*, so that it shall be easy to understand when one is to be used, and when the other? They are spelled and sounded nearly alike, but there is certainly some difference in their meaning: but some people use them in such a manner, that it would be very well to have rules for our guide.

Answer.—*Set* is a transitive verb, and *sit* is an intransitive. *Set* means to place  thing, and *sit* means to place one's self in a particular position. *Set* must always have the name of an object after it; but *sit* must not.

It is proper to say *I set myself down, I did set myself down, you have set the cup on the table.*

It is not proper to say *I set down, he sets in the chair, &c.*

It is proper to say, *I sit down, he sat down, &c.*

It is not proper to say *I sit myself, he sat himself, &c.*

Conjugation.

Infinitive Mood.—To set.

Indicative Mood, Imperfect Tense.—Set.

Imperfect Participle.—Set.

Infinitive Mood.—To sit.

Imperfect Tense.—Sat.

Imperfect Participle.—Sat.

Exercises.—Give ten sentences containing *set*, in different persons, or moods and tenses. Give ten similar ones containing *sit*.

To seat is another verb, nearly like *set* and *sit* in sound and meaning. *To seat* is a transitive verb, meaning, *to place on on a seat.*

Incombustible Wood.

The following recipe for rendering wood incombustible, has been, we believe, tested in regard to its efficacy; and although personally we have not seen it proved, think we can recommend it as being of much utility, particularly when applied to the surface of wooden roofs, or other places particularly exposed to

the action of fire. It is very simple in its preparation, which requires the operator merely to take a quantity of water proportionate to the surface of wood he may wish to cover, and add to it as much potash as can be dissolved therein. When the water will dissolve no more potash, stir into the solution, first, a quantity of flour paste of the consistency of common painter's size: second, a sufficiency of pure clay to render it of the consistency of cream. When the clay is well mixed, apply the preparation as before directed, to the wood; it will secure it from the action of both fire and rain. In a most violent fire, wood thus saturated may be carbonated, but it will never blaze.—*Sci. American.*

Cookery of the Sick-Room.

White Wine Whey.—To make this whey, put half a pint of milk diluted with a quarter of a pint of water into a saucepan, which must be placed on the fire uncovered. Watch the moment when the milk boils, which may be known by the frothing and rising up of the milk to the top of the pan; pour into it, at that instant, two glasses of white wine, and a tea-spoonful of powdered sugar, which should be previously mixed with the wine. The curd will immediately form; and, after boiling the mixture for a few minutes, may be separated from the whey, either by letting it settle at the bottom, and then pouring off the whey clear from it, or by straining it through a fine sieve. White wine whey, when drank warm, promotes perspiration; but as it is a stimulant, it cannot be given in inflammatory complaints. When cold, it is a very agreeable beverage in low fevers, and in convalescence, when stimulants are admissible.

Balm, Mint, and other Teas.—These are simple infusions, the strength of which can only be regulated by the taste. They are made by putting either the fresh or the dried plants into boiling water in a covered vessel, which should be placed near the fire for an hour. The young shoots both of balm and of mint are to be preferred, on account of their stronger aromatic qualities. These infusions may be drunk freely in feverish and in various other complaints, in which diluents are recommended. Mint tea, made with the fresh leaves, is useful in allaying nausea and vomiting.

POETRY.

For the American Magazine.
Past Scenes.

Oh, what a glance is that I cast
Back, on the dangerous way I've trod,
Beneath Thy watchful, guardian eye,
Led by Thy guiding hand, my God!

Days of distress and fear return
As now the varying scene I view:
Again I tremble, weep or mourn,
As mem'ry can the past renew.

Ah, now I see—I understand
Why through such gloomy paths I've trod:
Why, by a heavenly father's hand,
Such thorns were strew'd along the road.

My heart was hard, my will was strong;
I had affections wild and keen;
An ear for every syren's song;
A taste for every arbor green.

Had but the soft and silken grass
Beneath my faithless feet been spread;
Had prosperous gales, which others waft,
My full spread canvass swiftly sped;

I still had linger'd in the shade,
Where earthly music lures the soul;
Or, deeply sunk in ocean's bed,
Above me all her waves would roll.

The thorns did kindly wound my feet,
But blunted now have left but scars:
The surges long have ceas'd to beat
Whose thunders waked such timely fears.

Oh, what a glance is that I cast
Back on the dangerous way I've trod,
Beneath Thy watchful guardian eye,
Led by Thy guiding hand, my God!

A Mite for the Poor.

Think of the wretched room,
Of the embers burning low—
Think of the scanty garb,
Of the child of want and woe,
Ye, whose bright cup of life
With wealth is running o'er,
Think of your brother man—
Relieve him from your store.

If the widow's humble mite
Received the Saviour's praise,
Shall not your gifts be blest
In these our later days?

Aye! every deed of love
Is a bright and sparkling gem,
To be wreathed by angel hands
In our heavenly diadem. [Chr. All.]

ENIGMA.—No. 31.

I am composed of 14 letters.

My 1, 11, 12, 6, 10, is a town in Guatemala.

My 2, 7, 14, 6, 1, 5, 6, is the name of an Indian chief.

My 3, 6, 12, 11, 13, 14, 2, 3, is the name of a great General.

My 4, 6, 7, 5, 6, 6, 3, 10, 6, is the name of another General.

My 5, 14, 6, is an agreeable drink.

My 6, 12, 12, 14, 7, 9, 3, 14, 4, is a range of mountains.

My 7, 6, 12, 13, 14, 4, is a city in Italy.

My 8, 11, 9, 13, 14, 5, is a piece of furniture.

My 9, 13, 13, 9, 3, 2, 9, 4, is the name of a river in the U. States.

My 10, 9, 13, 14, is a river in Africa.

My 11, 10, 9, 2, 3, is a vegetable.

My 12, 2, is a river in Italy.

My 13, 6, 5, 8, 9, 1, 14, is a window.

My 14, 6, 4, 14, 13, is used by painters.

My whole is the name of a large city.

S. W. B.

Solution of Enigma No. 30, Vol. III. p. 48.
Pap, Apple, Bone, Trap, Nap, Bear, Pan,
Root.—Napoleon Bonaparte. E. T.

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